U.S. Serial No.: 09/305,738 Docket No.: 2324-7028US1

Listing of Claims:

Claims 1-26 (Canceled)

Claim 27. (Currently Amended): An artificial antibody ~~antibodies~~ comprising a crosslinked polymer prepared by molecular imprint polymerization and having a ~~specific~~ binding site ~~sites~~ having specificity for an imprinted molecule, wherein said artificial antibody ~~antibodies have~~ has a particle size of less than about five microns.

Claim 28. (Currently Amended): The artificial ~~antibodies~~ antibody according to claim 27, wherein said particle size is between about 10 nm and 100 nm.

Claim 29. (Currently Amended): The artificial ~~antibodies~~ antibody according to claim 27, wherein said specific binding sites are specific for a drug molecule ~~molecules~~.

Claim 30. (Currently Amended): The artificial ~~antibodies~~ antibody according to claim 29, wherein said drug molecule is theophylline.

Claim 31 (Currently Amended): The artificial ~~antibodies~~ antibody according to claim 29, wherein said drug molecule is a benzodiazepine drug.

Claim 32. (Currently Amended): The artificial ~~antibodies~~ antibody according to claim 29, wherein said drug molecule is diazepam.

Claim 33. (Currently Amended): The artificial ~~antibodies~~ antibody according to claim 29, wherein said drug molecule has a narrow therapeutic index.

Claim 34. (Currently Amended): A method for assaying a drug molecule in a fluid, ~~said method~~ comprising the ~~combination of~~ steps of:

~~1)~~ providing a fluid sample with a drug molecule,

~~2) adding a known amount of labeled drug molecule to said sample,~~

~~3)~~ contacting said sample ~~of step 2)~~ with an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for said drug molecule, wherein said artificial antibody has a particle size of less than about five microns ~~with the artificial antibodies antibody according to claim 27~~

binding said drug molecule with said artificial antibody ~~so that said drug molecule and said labeled drug molecule in said sample of step 2) competitively bind with said artificial antibodies; and~~

~~4) determining the amount of said labeled drug molecule unbound in said sample or bound to said artificial antibody so as to determine the amount of said drug molecule in said fluid~~.

Claim 35. (Canceled)

Claim 36. (Currently Amended): The artificial ~~antibodies~~ antibody according to claim 27, wherein said particle size is between about 10 nm and 1000 nm.

Claim 37. (Previously Presented): The method according to claim 34, wherein artificial antibody size is between about 10 nm and 100 nm.

Claim 38. (Previously Presented): The method according to claim 34, wherein artificial antibody size is between about 10 nm and 1000 nm.

Claims 39-45 (Canceled).

Claim 46. (New): The method according to claim 34, wherein the fluid is a bodily fluid.

Claim 47. (New): The method according to claim 34, wherein the fluid is a blood.

Claim 48. (New): The method according to claim 34, wherein the fluid is a plasma.

Claim 49. (New): The method according to claim 34, wherein the fluid is a serum.

Claim 50. (New): The method according to claim 34, further comprising the step of:

determining the amount of said drug molecule of said sample which is not bound to said antibody.

Claim 51. (New): The method according to claim 34, further comprising the step of:

determining the amount of said drug molecule of said sample which is bound to said antibody.

Claim 52. (New): The method according to claim 34, further comprising the step of:

determining the amount of said drug molecule in said sample.

Claim 53. (New): The method according to claim 34, wherein said drug molecule comprises a label.

Claim 54. (New): The method according to claim 53, wherein said label comprises at least a radioligand, an enzyme, biotin, a steroid, a fluorochrome, or a metal.

Claim 55. (New): The method according to claim 54, wherein said metal is gold.

Claim 56. (New): The method according to claim 53, wherein said label comprises at least an electrochemiluminescent compound.

Claim 57. (New): The artificial antibody according to claim 34, wherein said particle size is between about 10 nm and 1000 nm.

Claim 58. (New): A method of therapy, comprising:

providing an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for an imprinted molecule, wherein said artificial antibody has a particle size of less than about five microns,

administering said artificial antibody to a mammal body.

Claim 59. (New): The method according to claim 58, wherein said administering is into the bloodstream of said mammal.

Claim 60. (New): The method according to claim 58, further comprising the step of:

providing an artificial antibody having specificity for a target within said mammal body.

Claim 61. (New): The method according to claim 60, having said artificial antibody holding a drug molecule.

Claim 62. (New): The method according to claim 60, further comprising the step of:

encountering of said target by said artificial antibody.

Claim 63. (New): The method according to claim 61, further comprising the step of:

encountering of said target by said artificial antibody.

Claim 64. (New): The method according to claim 61, further comprising the step of:

said artificial antibody delivering said drug molecule to said target.

Claim 65. (New): The method according to any one of claims 60-64, having said target being a cancer cell.

Claim 66. (New): The method according to claim 64, further comprising the step of:

said drug molecule having a therapeutic effect on said target.

Claim 67. (New): The method according to claim 65, further comprising the step of:

said drug molecule having a therapeutic effect on said target.

Claim 68. (New): The method according to claim 58, further comprising the step of:

assembling a plurality of said artificial antibody around a cancer cell.

Claim 69. (New): The method according to claim 58, further comprising the step of:

providing said artificial antibody, wherein said artificial antibody holds a drug molecule,

transporting said drug to a specific target within said mammal body.

Claim 70. (New): The method according to claim 69, wherein said specific target is a cancer cell.

Claim 71. (New): A method of diagnosis, comprising the steps of:

providing an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for an imprinted molecule, wherein said artificial antibody has a particle size of less than about five microns,

administering said artificial antibody to a mammal body.

Claim 72. (New): The artificial antibody according to claim 27, wherein said molecular imprint polymerization at least reacts a methacrylic acid molecule with an ethylene glycol dimethacrylate molecule.

Claim 73. (New): The artificial antibody according to claim 27, wherein said molecular imprint polymerization reacts at least one molecule of itaconic acid, vinylpyridine, vinylimidazole, or alkylated hydrophobic monomer.

Claim 74. (New): The artificial antibody according to claim 27, wherein said binding site is specific for at least a nucleic acid or a nucleotide.

Claim 75. (New): The artificial antibody according to claim 27, wherein said binding site is specific for a metabolite.

Claim 76. (New): The artificial antibody according to claim 27, wherein said binding site is specific for a toxin.

Claim 77. (New): The artificial antibody according to claim 27, wherein said binding site is specific for a prostaglandin molecule.

Claim 78. (New): The artificial antibody according to claim 27, wherein said binding site is specific for a hormone.

Claim 79. (New): The artificial antibody according to claim 27, wherein said binding site is specific for an opiate molecule.

Claim 80. (New): A method of analyzing a fluid sample, comprising the steps of:

providing an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for an imprinted molecule, wherein said artificial antibody has a particle size of less than about five microns,

administering said artificial antibody to a fluid sample.

Claim 81. (New): The method of analyzing a fluid sample according to claim 80, said fluid sample comprising a bodily fluid.

Claim 82. (New): The method of analyzing a fluid sample according to claim 80, said fluid sample comprising a blood.

Claim 83. (New): The method of analyzing a fluid sample according to claim 80, said fluid sample comprising a plasma.

Claim 84. (New): The method of analyzing a fluid sample according to claim 80, said fluid sample comprising a serum.

Claim 85. (New): A method of purification, comprising:

providing an extra-corporal device containing an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for an imprinted molecule, wherein said artificial antibody has a particle size of less than about five microns,

drawing a bodily fluid from a patient,

passing said bodily fluid through said device.

Claim 86. (New): The method of purification according to claim 85, further comprising the step of:

returning said bodily fluid to said patient after said passing said bodily fluid through said device.

Claim 87. (New): An artificial antibody, comprising:

a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for an imprinted molecule, wherein said artificial antibody is biocompatible in a mammal and has a particle size of less than about five microns.

Claim 88 (New): A method for assaying a drug molecule in a fluid, comprising the steps of:

providing a fluid sample with a drug molecule,

adding a known amount of labeled drug molecule to said sample,

contacting said sample with an artificial antibody comprising a crosslinked polymer prepared by molecular imprint polymerization and having a binding site having specificity for said drug molecule wherein said artificial antibody has a particle size of less than about five microns,

binding said drug molecule with said artificial antibody so that said drug molecule and said labeled drug molecule in said sample competitively bind with said artificial antibodies; and

determining the amount of said labeled drug molecule unbound in said sample or bound to said artificial antibody so as to determine the amount of said drug molecule in said fluid.

Claim 89 (New): The method according to claim 88, wherein artificial antibody size is between about 10 nm and 100 nm.

Claim 90 (New): The method according to claim 88, wherein artificial antibody size is between about 10 nm and 1000 nm.